

Saving energy in primary health buildings

– an introduction for practice managers

- Reducing energy costs
- Good housekeeping
- Low-cost investments
- Your actions and the environment



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Saving energy in primary health buildings

THE BOTTOM LINE

Wasting energy wastes money!

A recent survey of premises in the primary health care sector revealed that a few simple actions could save 30% of annual fuel and water bills and in some premises as much as 50%.

That means up to £5 per square metre of floor area every year is wasted.

For the average five-doctor practice, this represents a potential saving of £2000 per year.

Inefficient buildings not only waste energy, but can also result in a poor indoor environment that is far from conducive to staff and patient comfort or for optimised medical provision.

This may well be the result of:

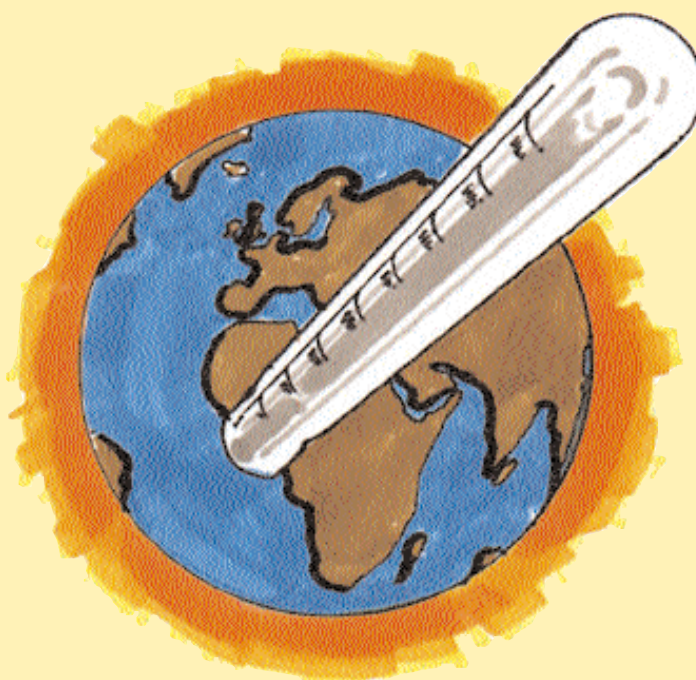
- inefficient lighting
- poorly controlled heating
- low levels of insulation.

Wasting energy threatens the health of the global environment!

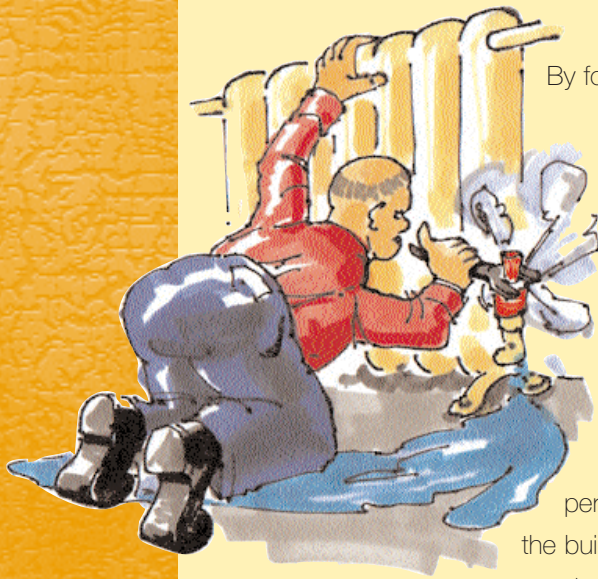
Using electricity and burning gas or oil in our own boilers and cars results in emissions of carbon dioxide (CO₂) and other pollutants, which are released into the atmosphere.

Excess CO₂ exacerbates the greenhouse effect in the Earth's atmosphere. This results in global warming which, in turn, is contributing to climate change. Climate change is thought likely to result in drought, floods, and future increases in sea levels – a potential disaster for mankind.

Energy efficiency has a big part to play in reducing this threat and can substantially reduce the energy use of your practice. Energy-efficient buildings provide the required internal environment and services with the minimum energy use in a cost-effective and environmentally sensitive manner.



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By following the advice given in this Leaflet and using the checklists at the back, you can begin to make improvements in the energy performance of the buildings in your practice.

Some simple steps

Step 1

Check to see that the primary care group (PCG) or local health group has put energy efficiency on the management agenda. Ask at the regular meetings with your primary care development manager. A PCG-wide approach will harness more resources.

If your premises are owned by an NHS Trust rather than the doctors themselves, ask the Trust's estates department if they are including smaller buildings such as yours in their energy policy.

Step 2

Examine the two energy efficiency checklists inside the back cover of this Leaflet on:

- good housekeeping
- ways to save energy.

Step 3

Carry out a brief walkround survey, filling in the good housekeeping checklist as you go.

Also take the checklist of 'ways to save energy costs' with you and mark any that you think might be applicable. If there's anything you can't check out for yourself, make a note to ask a maintenance contractor to check for you when they next visit.

Remember to copy both checklists so that you can repeat the exercise at a later date to continuously check that measures are being adhered to.

Step 4

Discuss the measures described in the checklists with the GPs and staff at your next staff meeting.

There is a leaflet for GPs called 'Why should you think about gas, electricity and water?'. For this and other information telephone the Energy and Environment Helpline on 0800 585794 or visit the Energy Efficiency Best Practice programme website at www.energy-efficiency.gov.uk.

Step 5

Agree a policy and action plan with staff to incorporate the suggested no-cost measures shown in the good housekeeping checklist.

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Use posters and stickers as a continual reminder to staff and anyone else who visits the building.

Step 6

Draw up a list of possible measures that require investment. Plan to replace anything that is approaching the end of its life, or has implications for health and safety, or the comfort of staff and patients.

Step 7

If you are unsure, call upon some expert help to confirm that the measures are applicable. (see the 'Help!' section of this Leaflet)

If the PCG or your premises come under an NHS Trust, involve the Trust's estates or energy manager. They may have experience of similar measures in nearby hospitals or other Trust buildings.

Step 8

Discuss the measures with your PCG at the regular meetings. Get help from the primary care development manager to prepare an outline business case for the investment. Agree the funding and make it part of the improvement plan for your practice.

A determined campaign will mean an efficient building that is both safe and comfortable for staff to work in and for patients to visit.

Procurement of new buildings

If your practice has plans for new buildings or refurbishment, ensure that the people responsible for designing the new building are aware of your practice's commitment to energy efficiency. It is more cost-effective to design energy-efficient plant and equipment into a new building than to replace existing plant.

The resulting improved efficiency of your buildings will go a long way to meeting the National Priorities Guidance in relation to providing a 'fast, fair and convenient service' in buildings 'fit for purpose'.



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Further assistance

Energy Efficiency Best Practice programme (EEBPp)

The EEBPp provides impartial help and advice. Free information is available on almost every issue that is relevant to saving energy, including a model energy policy, staff motivation, training, Design Advice, purchasing and every conceivable technical subject. Posters, stickers and some free consultancy are available.

Action Energy

Action Energy is a new initiative under the EEBPp providing consultancy focussed on your individual business needs. The scheme provides, for example, one day's free consultancy, plus subsidised ongoing consultancy if required, using a panel of registered energy consultants. This can help you specifically when considering new building work or refurbishment, which is a good time to improve insulation, lighting or heating systems.

Information is available from the EEBPp's website, www.energy-efficiency.gov.uk, and the Environment and Energy Helpline on 0800 585794.

Support from your local authority

Under Agenda 21 and Business Links local authorities are increasingly

developing energy advice services for the wider community. Many have energy conservation guidance and some provide renovation grants. It is worth a call to the Planning Department, Building Control or Environmental Health sections.

Help with funding

NHS funding

Each year your PCG has to prepare a primary care investment plan, listing all proposals for developing and improving the practices. These can include improvements to the building such as energy efficiency works.

The PCG (and in Wales the local health group) has a budget for improvement grants for GP premises, and these can pay for up to 66% of the cost of new lighting, heating and ventilation systems, and double glazing. Your primary care development manager can advise your staff on the availability of funds in your area, and help them to submit a proposal.

External grants

Your gas, electricity and water suppliers often provide customer discounts on capital purchases. Ring the helpline on each account. Many suppliers are running efficiency schemes for their customers in support of the government's efficiency drive.

This leaflet is based on information drafted under contract to BRECSU, which has responsibility for buildings-related aspects of the Energy Efficiency Best Practice programme.

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A checklist of ways to save energy costs

This list shows 14 common ways to save energy costs that can be taken in primary health care buildings. They are listed in a suggested order of priority. Use it to check which of them might be applicable to your premises.

If there's something you can't check out for yourself, show this list to a heating engineer, electrician or estates department maintenance technician next time they call. More explanation is available in EEBPp publications (see 'Further assistance' on page 5).

Measure	Tick if applicable
Having an energy policy. This provides a management framework in which energy savings can be achieved. Where no written energy policy is in place, one should be developed and communicated to all staff. Where a policy is in place for the wider PCG, or for the Trust that owns the premises, it should be adopted by each GP practice. Such a policy is likely to be a requirement for any grant application.	
Paying for what you use. Check your bills. Estimated bills can be wildly inaccurate. Meters should be read regularly and checked against incoming bills. This will also help to identify more fundamental problems such as billing for the wrong address, non-existent meters, etc.	
Fuel purchasing. Getting quotations from a number of fuel suppliers often results in a better price. Your health authority can often negotiate fuel contracts on your behalf.	
Lighting controls. The use of compact fluorescent lamps (CFLs) and fluorescent strip lighting should be effectively controlled by photoelectric and passive infrared (PIR) controls. Its control gear should be high frequency and low loss. If there are only manual on/off switches, consider installing automatic controls that respond to occupancy and daylight levels. Consider including installing soft-start to extend lamp life and deliver further energy savings.	
Fluorescent strip lights should be fitted with Slimline T8 triphosphor tubes. Lack of maintenance could cost, as darkened tubes and flickering tubes have an energy consumption greater than new tubes.	
Compact fluorescent lamps. Where tungsten lamps are being used, replace with CFLs, or better, with tubular fluorescent lamps. Removing tungsten bulbs gives substantial savings.	
Hot water pipes and valves should be wrapped in good-quality insulation. This is particularly important in boiler rooms where pipes are out of sight. However, in staff areas lack of pipe insulation can contribute to overheating.	

Measure	Tick if applicable
Maintenance improvement. Check that plant and equipment are regularly inspected and maintained. If there is a poor standard of plant maintenance and controls setting, systems will not operate at their maximum efficiency.	
Boilers. Where the plant appears to be nearing the end of its life, consider replacing with a high-efficiency condensing boiler.	
Heating controls. Check control settings. Controls should be set for actual occupancy times and minimum comfort levels. If the controls do not provide as a minimum separate 'on' times for each day of the week they should be replaced. Ideally they should provide two 'on' periods per day, weather compensation and optimum start and stop especially for bigger buildings. It is usually cost-effective to install these functions if they are not there. Unless heating controls are working properly, almost nothing else is worth doing.	
Wall cavities. If your buildings were built before 1980 your walls may not have cavity insulation. Cavity-filling with, for example, blown mineral fibre is feasible in accordance with the industry guidelines. Installation must be subject to further survey to check condition of cavity and wall ties.	
Draught seal or double glaze windows, hatches, doors and floors. Where draughts are evident, good-quality retrofit draught sealing is recommended. Double glaze only if the existing windows appear to be at the end of their life.	
Ventilation. Where insufficient ventilation has been provided to a tightly sealed building, and symptoms such as condensation or use of dehumidifiers is evident, provide passive trickle vents. These may be retrofitted to windows or walls.	
Lofts. In pitched roofs where no loft insulation exists, or where existing depth is 100 mm or less or disturbed and patchy, top-up to 200 mm. Make sure there is adequate crossflow of air and insulate any tanks or pipework above the main insulation layer.	

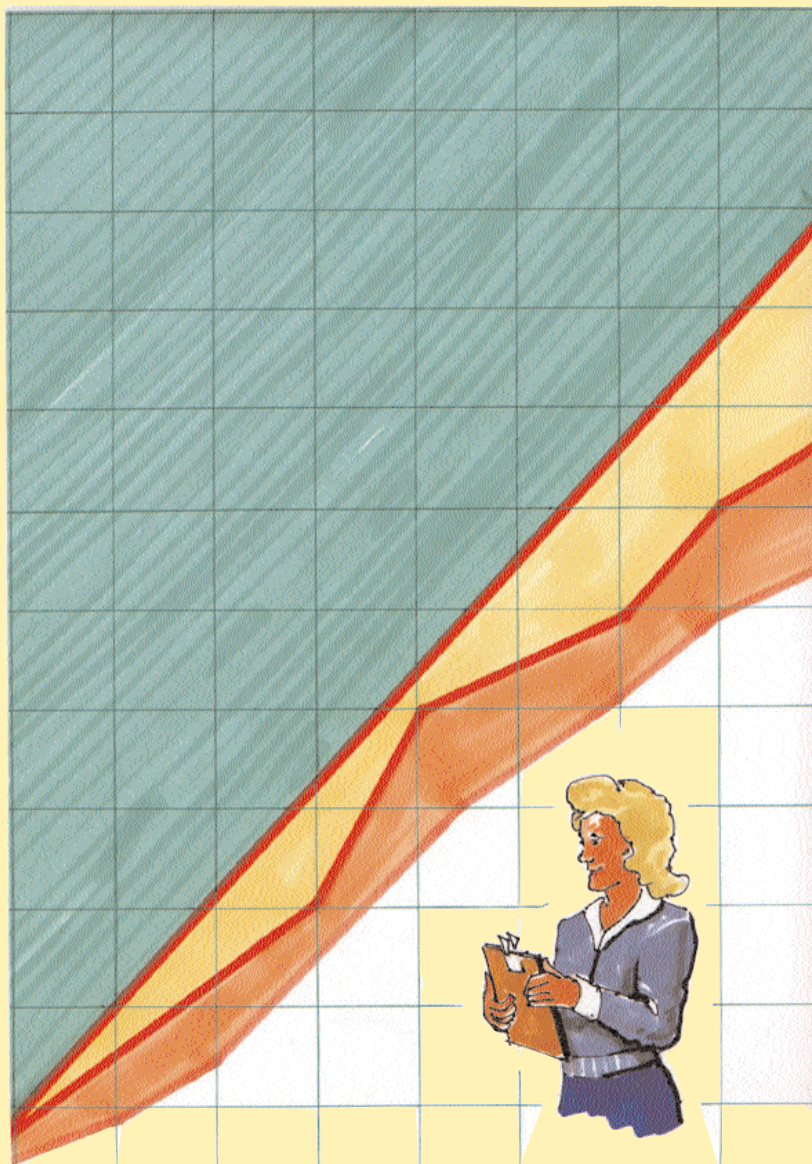
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Good housekeeping checklist

Heating		Tick
Are windows and doors open when heating is on?	Check heating controls and reset room temperatures so that patients and staff are comfortable. If not, raise issue at policy review. Ask staff to turn off radiators before opening a window.	
Are windows open out of hours?	Introduce a close-down routine to include window closure. Don't leave it to the cleaner.	
Is heating on out of hours?	Check heating control settings, and set 'on' times only when needed.	
Are rooms overheated?	Check heating controls and reset room temperatures for comfort	
Are room temperatures uneven?	Survey all rooms in winter and arrange radiator balancing.	
Are sensible clothes being worn?	Discuss with staff.	
Lighting		
Are lights on in unoccupied areas?	Introduce a turn-off policy. Modern lights are not more efficient when left on, even for short periods.	
Are lights on out of hours?	Include lights in close-down routine. Ensure staff, including cleaners, are part of the policy so that whole buildings are not lit for one room.	
Equipment		
Is it left on when unattended?	Include in turn-off policy. Check computers are 'Energy Star' compliant, ie automatically power down and turn monitor off.	
Is it left on out of hours?	Kill the hum! You will be surprised how many fans, computers, copiers and printers get left on. Ask each member of staff to display prominently a list of items in his/her area to turn off.	
Water		
Is it too hot?	If the hot water cylinder has a thermostat, set it to 62.5°C	
Are taps left on?	Include in turn-off policy.	
Are they dripping?	Arrange renewal of tap washers.	
Are urinals continually flushing?	Arrange for the control valve to be adjusted.	
Is any water being used at night?	Check the water meter for flow when building is empty. If nothing is left running and the meter says otherwise, arrange leak detection survey.	
Bills		
Are bills being paid without checking?	Draw up a meter reading sheet and read all meters once a month for bill checking.	
Incentive		
Is there a target?	Examine past bills to establish base costs and set target. Display actual consumption vs target.	
Do staff have any incentive?	Discuss with staff and devise one – you will be surprised how small considerations will encourage participation.	

If the waste of energy and water in the workplace is to become unacceptable we all have to play our part.

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The Government's Energy Efficiency Best Practice programme provides impartial, authoritative information on energy efficiency techniques and technologies in industry and buildings. This information is disseminated through publications, videos and software, together with seminars, workshops and other events. Publications within the Best Practice programme are shown opposite.

Visit the website at **www.energy-efficiency.gov.uk**

Call the Environment and Energy Helpline on **0800 585794**

Energy Consumption Guides: compare energy use in specific processes, operations, plant and building types.

Good Practice: promotes proven energy-efficient techniques through Guides and Case Studies.

New Practice: monitors first commercial applications of new energy efficiency measures.

Future Practice: reports on joint R&D ventures into new energy efficiency measures.

General Information: describes concepts and approaches yet to be fully established as good practice.

Fuel Efficiency Booklets: give detailed information on specific technologies and techniques.

Introduction to Energy Efficiency: helps new energy managers understand the use and costs of heating, lighting, etc.

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